British Association of Dermatologists guidelines for the management of hidradenitis suppurativa (acne inversa) 2018

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NICE has accredited the process used by the British Association of Dermatologists to produce clinical guidelines. The renewed accreditation is valid until 31 May 2021 and applies to guidance produced using the process described in Updated guidance for writing a British Association of Dermatologists clinical guidance – the adoption of the GRADE methodology 2016. The original accreditation term began on 12 May 2010. More information on accreditation can be viewed at www.nice.org.uk/accreditation.

1.0 PURPOSE AND SCOPE

The overall objective of the guideline is to provide up-to-date, evidence-based recommendations for the management of hidradenitis suppurativa (HS). The document aims to:

- offer an appraisal of all relevant literature up to July 2018, focusing on any key developments
- address important, practical clinical questions relating to the primary guideline objective.

- provide guideline recommendations and if appropriate research recommendations

The guideline is presented as a detailed review with highlighted recommendations for practical use in primary care and secondary care, in addition to an updated Patient Information Leaflet (PIL; available on the BAD website, www.bad.org.uk/leaflets).

1.1 Exclusions

This guideline does not cover management of the non-HS elements of syndromes such as PASH (pyoderma gangrenosum, acne, and hidradenitis suppurativa) and PAPASH (pyoderma gangrenosum, acne, psoriasis, arthritis and suppurative hidradenitis). Nearly all the evidence underpinning the guideline relates to studies in adults. The guideline development group (GDG) is mindful that HS onset is often before adulthood and interventions used for adults with HS are quite often considered for young people and children. Given the paucity of high-quality evidence relating to HS in those younger than 18 years, with the exception of adalimumab being licensed for people with HS aged 12 years and above, specific recommendations about treatment in young people and children could not be included at the current time.

2.0 METHODOLOGY

This set of guidelines has been developed using the BAD's recommended methodology[1] (see further information in Appendix J) with reference to the Appraisal of Guidelines Research and Evaluation (AGREE II) instrument [www.agreetrust.org][2] and the Grading of Recommendations Assessment, Development and Evaluation (GRADE).[3] Recommendations were developed for implementation in the UK National Health Service (NHS).

The GDG, which consisted of consultant dermatologists, a consultant plastic surgeon, a general practitioner, a dermatology registrar, a clinical nurse specialist, patient representatives and a technical team (consisting of a guideline research fellow and project manager providing methodological and technical support), established several clinical questions pertinent to the scope of the guideline and a set of outcome measures of importance to patients, ranked according to the GRADE methodology (see section 3.0).

A systematic literature search of PubMed, MEDLINE, EMBASE, Cochrane and AMED databases was conducted by the technical team to identify key articles for hidradenitis suppurativa up to July 2018; search terms and strategies are detailed in the supplementary information (Appendix K). Additional references relevant to the topic were also isolated from citations in reviewed literature. Data extraction and critical appraisal were carried out by two clinicians and checked by the technical team. Data synthesis, evidence summaries, lists of excluded studies and the PRISMA diagram were prepared by the technical team. Evidence from included studies was rated according to the GRADE system (high, moderate, low or very low quality). Recommendations are based on evidence drawn from systematic reviews of the literature pertaining to the clinical questions identified, following discussions with the entire GDG and factoring in all four factors that would affect its strength rating according to the GRADE approach (i.e. balance between desirable and desirable effects, quality of evidence, patient values and preferences and resource allocation). All GDG members contributed towards drafting and/or reviewing the narratives and information in the guideline and supporting information documents. When there is insufficient evidence from the

literature, informal consensus is reached based on the experience of the GDG. The summary of findings with forest plots (Appendix D), GRADE evidence profiles indicating the quality of evidence (Appendix E), clinical evidence summary (Appendix B), summary of included comparative studies (Appendix F), narrative findings tables for non-comparative studies (Appendix G), tables Linking the Evidence To the Recommendations (LETR, Appendix C), PRISMA flow diagram (Appendix H) and lists of excluded studies (Appendix I) are detailed in the supporting information. The strength of recommendation is expressed by the wording and symbols as shown in Table 1.

Strength	Wording	Symbols	Definition
Strong recommendation *for* the use of an intervention	"Offer" *(or similar, e.g. "Use", "Provide", "Take", "Investigate", etc.)*	↑↑	Benefits of the intervention outweigh the risks; most patients would choose the intervention whilst only a small proportion would not; for clinicians, most of their patients would receive the intervention; for policy makers, it would be a useful performance indicator.
Weak recommendation *for* the use of an intervention	"Consider"	↑	Risks and benefits of the intervention are finely balanced; most patients would choose the intervention, but many would not; clinicians would need to consider the pros and cons for the patient in the context of the evidence; for policy makers, it would be a poor performance indicator where variability in practice is expected.
No recommendation		Θ	Insufficient evidence to support any recommendation.
Strong recommendation *against* the use of an intervention	"Do not offer"	↓↓	Risks of the intervention outweigh the benefits; most patients would *not* choose the intervention whilst only a small proportion would; for clinicians, most of their patients would *not* receive the intervention.

Table 1. Strength of recommendation ratings

3.0 INTRODUCTION

There is currently a paucity of effective treatment options for HS, but common medical therapy approaches include antiseptic washes, steroid injections, topical and oral antibiotics (single agents or combination treatment), retinoids, dapsone, oral contraceptive agents, oral immunomodulators, and anti-TNF therapy. Surgical procedures range from incision and drainage for acute flares, narrow margin excision and extensive excision with closure by secondary intention, skin flap or graft. Other treatment options include radiotherapy, psoralen and UVA (PUVA) phototherapy, photodynamic therapy and laser therapy.

3.1 Clinical questions and outcomes

Management strategies in HS are highly variable and are currently undertaken by both generalists and specialists spanning emergency medicine, internal medicine, dermatology, plastic surgery, urology, gynaecology and general surgery. To address these matters the GDG established several clinical questions pertinent to the scope of the guideline.

In people with hidradenitis suppurativa:

1. What is the efficacy and safety of medical interventions?
    - topical
    - conventional systemic
    - biologic
    - laser and light
    - other therapies
2. What is the efficacy and safety of surgical interventions?
3. What are the self-management options and the evidence to support them?

The GDG also established two sets of outcome measures of importance to patients (see Table 2), one for medical interventions and another for surgery; these were ranked according to the GRADE methodology[4] by patient/carer representatives, data on which are extracted from included studies (see Appendix F). Outcomes ranked 7, 8 and 9 are critical for decision-making; those ranked 4, 5 and 6 are important but not critical for decision making:

Medical interventions		**Surgical interventions**	
Quality of Life (QoL)	9	Recurrence rate	9
Adverse effects – serious	9	QoL	9
Pain	9	Overall satisfaction	8
Disease-specific physician score	6	Functional (arm abduction)	8
Physician's global assessment (PGA)	5	Complication rates	7
Patient's global self-assessment	5	Cosmetic	6
Adverse events – nuisance	4	Duration of hospitalization	5
		Total patient downtime	4

Table 2. Outcome measures of importance to patients for medical and surgical interventions

4.0 SUMMARY OF RECOMMENDATIONS

The following recommendations and ratings were agreed upon unanimously by the core members of the GDG and patient/carer representatives. For further information on the wording used for recommendations and strength of recommendation ratings see Table 1. The evidence for recommendations is based on the studies as listed. GDG recommendations relating to referral pathways are based on discussion and clinical experience, as evidence-based details are not available at the time of writing. The GDG is aware of the lack of high-quality evidence for some of these recommendations, therefore strong recommendations with an asterisk (*) are based on available evidence, as well as consensus and specialist experience. Good practice point (GPP) recommendations are derived from informal consensus.

R1 (GPP) Manage people with HS via a multi-disciplinary team approach, particularly when considering surgical interventions

R2 (GPP) In all people with HS, document the Hurley stage at baseline for the worst-affected region. For Hurley stage III (severe) disease consider immediate referral to dermatology secondary care.

R3 (GPP) Provide a patient information leaflet (www.bad.org.uk/leaflets) to all people with HS, treat pain if needed and provide dressings for pus-producing lesions

R4 (GPP) Screen people with HS for associated co-morbidities including depression, anxiety and cardiovascular risk factors (diabetes, hypertension, hyperlipidaemia and central obesity). If persistent gastrointestinal symptoms are reported refer for inflammatory bowel disease screening.

R5 (GPP) Where relevant, refer people with HS to smoking-cessation services

R6 (GPP) Where relevant, refer people with HS to weight-management services

R7 (GPP) Measure treatment response in people with HS using recognized instruments for pain and quality of life, including an inflammatory lesion count for those on adalimumab therapy

R8 (GPP) In people with long-standing, moderate-to-severe HS, monitor for fistulating gastrointestinal disease, inflammatory arthritis, genital lymphoedema, cutaneous squamous cell carcinoma, and also for anaemia

R9 (↑↑) Offer* oral tetracyclines such as doxycycline or lymecycline for at least 12 weeks to people with HS, considering treatment breaks to assess need for ongoing therapy and to limit the risk of antimicrobial resistance

R10 (↑↑) Offer* combination treatment with oral clindamycin 300 mg twice daily and rifampicin 300 mg twice daily for 10 to 12 weeks to people with HS who are unresponsive to oral tetracyclines

R11 (↑) Consider acitretin 0.3-0.5 mg/kg/day in males and non-fertile females with HS who are unresponsive to antibiotic therapies

R12 (↑) Consider dapsone in people with HS who are unresponsive to antibiotic therapies

R13 (↑↑) Offer* adalimumab[1] 40 mg weekly to people with moderate-to-severe HS that is unresponsive to conventional systemic therapy

R14 (↑) Consider infliximab 5 mg/kg every 8 weeks in people with moderate-to-severe HS that is unresponsive to adalimumab therapy

[1] Licensed for children and young people aged 12 to 17 years, and adults

R15 (↑) Consider clindamycin 1% solution in people with HS

R16 (↑) Consider intralesional corticosteroid injections for carefully selected, individual HS lesions during the acute phase

R17 (GPP) Consider metformin in people with HS with concomitant diabetes mellitus, and females with HS and polycystic ovary syndrome or pregnancy

R18 (↑) Consider extensive excision in people with HS to minimise recurrence rate

R19 (↑) Consider extensive excision for people with HS when conventional systemic treatments have failed

R20 (↑) Consider secondary intention healing (or TDAP flap closure for axillary wounds) in people with HS following extensive excision

R21 (↓↓) Do not offer* isotretinoin to people with HS unless there are concomitant moderate-to-severe acneiform lesions of the face or trunk

R22 (↓↓) Do not offer* adalimumab 40 mg every other week to people with moderate-to-severe HS that is unresponsive to conventional systemic therapy

R23 (↓↓) Do not offer* etanercept to people with moderate-to-severe HS that is unresponsive to conventional systemic therapy

R24 (↓↓) Do not offer* cryotherapy to people with HS to treat lesions during the acute phase due to pain from the procedure

R25 (↓↓) Do not offer* microwave ablation to people with HS

Insufficient evidence to support any recommendation

Θ Currently, there is insufficient evidence to recommend alitretinoin, anakinra, apremilast, atorvastatin, azathioprine, ciclosporin, colchicine, cyproterone, ethinyloestradiol with cyproterone acetate, ethinyloestradiol with norgestrel, finasteride, fumaric acid esters, hydrocortisone, hyperbaric oxygen therapy, intravenous antibiotics, isoniazid, laser and photodynamic therapies, MABp1 (anti-IL-1 therapy), methotrexate, oral prednisolone, oral zinc, phototherapy, photochemotherapy, radiotherapy, secukinumab, spironolactone, staphage lysate, tolmetin sodium and ustekinumab for people with HS that is unresponsive to conventional systemic therapy

List of key future research recommendations (FRRs)

FRR1 A prospective RCT evaluating the alignment/role of biologic therapy with surgical intervention in HS, in terms of pre-/post-surgical treatment and peri-operative continuation of biologic therapy

FRR2 A prospective RCT evaluating the efficacy and safety of anakinra in people with (moderate-to-severe?) HS (that is unresponsive to conventional systemic therapy)

FRR3 A prospective RCT evaluating the efficacy and safety of ustekinumab in people with (moderate-to-severe?) HS (that is unresponsive to conventional systemic therapy)

FRR4 A prospective RCT evaluating the efficacy and safety of secukinumab in people with (moderate-to-severe) HS (that is unresponsive to conventional systemic therapy)

FRR5 A registry of people with HS receiving systemic therapy, including biologic therapy, to determine the long-term safety and efficacy of these interventions

FRR6 A prospective RCT evaluating the relative efficacy and tolerability of topical antiseptics and topical antibiotics for mild HS

FRR7 A prospective RCT evaluating the efficacy and safety of laser and light therapies in people with HS. Trials adopting a within-participant design should incorporate a sham intervention where possible, with matched left/right anatomical sites, and report all results fully (i.e. number of participants with i) positive outcomes for both interventions, ii) positive outcomes for only one intervention (reported separately for each intervention) and iii) negative outcomes for both interventions)

FRR8 A larger, prospective RCT evaluating the dosing, efficacy and safety of oral tetracyclines in HS

FRR9 A prospective RCT evaluating the efficacy, duration of treatment and safety of oral clindamycin and rifampicin in people with HS

FRR10 A prospective RCT evaluating the efficacy and safety of oral retinoids in people with HS

FRR11 A prospective RCT evaluating the efficacy and safety of dapsone in people with HS

FRR12 A prospective RCT investigating the management of acute flares, including intralesional triamcinolone injections

FRR13 A prospective RCT evaluating lifestyle modifications, such as smoking cessation and weight loss, on HS severity

FRR14 A long-term pharmacovigilance study (open registry) for systemic therapy including biologic therapy

FRR15 Studies on stratification of treatment response (personalised medicine) – phenotype, genotype, biomarkers, pK studies

FRR16 A prospective RCT investigating intravenous antibiotics in people with moderate-to-severe HS

FRR17 A prospective RCT investigating endocrine therapies in people with HS

FRR18 A prospective RCT of extensive excision of axillary HS (Hurley stages II and III) with closure using TDAP flaps vs. secondary intention closure (possibility of within-participant, bilateral studies)

FRR19 A prospective RCT of continued optimal non-surgical therapy with extensive surgical excision of a single site for comparative evaluation of outcome between operated site and contralateral non-operated axilla or groin

FRR20 A prospective head-to-head RCT of deroofing vs. best medical intervention

FRR21 A long-term study looking at recurrence and complication rates following surgery

FRR22 A prospective RCT of extensive excision of axillary HS compared with narrow margin excision of active lesions (possibility of within-participant, bilateral studies)

5.0 ALGORITHM

The recommendations and discussions in the LETR (see Appendix C in the supplementary information) and consensus specialist experience were used to produce the management pathway for people with HS (Figure 1).

(see separate JPEG 600 dpi file)

Figure 1. Management pathway for people with HS. *Licensed in those aged 12 years and above. **Surgical interventions are relatively under-represented in the management pathway because evidence of high quality, in the form of randomised controlled trials, is sparse.

6.0 BACKGROUND

6.1 Definition

Hidradenitis suppurativa (HS) is defined as a “chronic, inflammatory, recurrent, debilitating, skin follicular disease that usually presents after puberty with painful deep seated, inflamed lesions in the apocrine gland-bearing areas of the body, most commonly, the axillary, inguinal and anogenital regions”.[5,6]

6.2 Epidemiology

Prevalence has been estimated at approximately 1-4% in the U.K. population[7] and the typical age of onset is in the second to fourth decades of life.[8-10] There is a female predominance (3:1, F:M) and an association with obesity and smoking, with odds ratios of 3.3 and 3.6, respectively, compared with controls.[7] However, non-smoking patients of normal BMI are seen in clinical practice. A population-based study from the USA found that HS prevalence among African American and biracial individuals was 3-fold and 2-fold greater, respectively, than the prevalence in white individuals.[11] There is a nearly doubled risk of cardiovascular-associated death in HS patients compared with controls,[12] in keeping with high rates of smoking and also associations with type 2 diabetes, hyperlipidaemia and hypertension.[7] HS is associated with pilonidal sinus, which may be a phenotypic variant, as well as acne vulgaris[7] People with HS have a higher risk of depression[7,13] and completed suicide [14] which may relate to HS being a chronic, painful disease with a large impact on

quality of life. There is an association between HS and Crohn's disease but not with ulcerative colitis.[7,15]

6.3 Clinical presentation

HS may present with comedones (characteristically paired), papules, pustules, nodules, cysts, abscesses, sinus tracts and fistulae in flexural areas however there is significant phenotypic variation amongst patients.[16] The condition can cause severe pain, as well as pruritus, chronic discharge (serous, purulent or blood-stained) and a persistent malodour. Longstanding disease can result in fibrosis, dermal contractures, scarring and a consequent reduction in mobility. The disease targets flexural areas, notably the axillae, groin, perineum, buttocks, medial thighs, sub-mammary region, abdominal fold and posterior auricular region. Disease complications include fistula formation (affecting the urethra, bladder or rectum), lymphoedema, anaemia and the development of squamous cell carcinoma (SCC).[17]

The associated pain, chronic purulent discharge, persistent malodour and the involvement of intimate sites in HS can result in significant patient morbidity. A survey of 114 patients referred to secondary care revealed an average Dermatology Life Quality Index (DLQI) score of 8.9,[18] demonstrating a moderate effect on quality of life. HS can have far reaching social and economic consequences, affecting sexual health,[19] relationships and employment.

6.4 Diagnostic criteria and measures of disease severity

Consensus diagnostic criteria state that individuals require typical lesions (painful nodules, abscesses, sinus tracts, bridged scars or open comedones) in typical sites (axillae, groin, perineal region, perianal region, infra and inter mammary folds or buttocks) and that the disease must be chronic and recurrent.[20] Baseline disease severity in each skin region is often measured using the Hurley staging system (Table 3).[21] The Hurley system is relatively insensitive to change, and so other instruments are used to measure the efficacy of treatment. Patient-reported domains include pain, measured with a visual analogue scale or numeric rating scale (0-10) and quality of life, measured with a dermatology-specific scale such as the dermatology life quality index (DLQI)[22] or Skindex.[23] Several physician-reported instruments are available in the literature including Sartorius score;[24] however, most have not undergone robust validation.[25] More recently, HiSCR has been developed as an endpoint for clinical trials, defined as a 50% reduction from baseline in inflammatory nodules and abscesses, with no increase in abscesses or draining sinuses.[26] In approving adalimumab for moderate-to-severe HS, NICE used a modified version of the HiSCR endpoint, stipulating that a 25% reduction in inflammatory nodules and abscesses is required to continue therapy.[27]

Stage	Disease severity in particular region	Description
I	Mild	Isolated lesions with no sinus tract formation and minimal or no scarring
II	Moderate	Recurrent lesions separated by normal skin with sinus tract formation and scarring
III	Severe	Multiple lesions coalescing into inflammatory plaques

		involving most of the affected region

Table 3. Hurley staging system for baseline disease severity in each skin region

6.5 Dermatopathology

HS is a clinical diagnosis and histopathological confirmation is rarely needed. Common histopathological features include follicular hyperkeratosis, follicular hyperplasia and follicular occlusion with an associated spongiform infundibulofolliculitis.[28] These changes may be associated with follicular dilatation, follicular rupture and the formation of keratin containing cysts (lined by stratified squamous epithelium), abscesses, sinus tracts, granulomas, fibrosis and scarring.

6.6 Disease pathogenesis

The pathogenesis of HS remains poorly understood. Histopathological studies suggest that HS is primarily a disease of follicular occlusion.[28] Up to 42% of HS patients report a family history of the condition and it can follow autosomal dominant inheritance in some kindreds.[29,30] Recent genetic studies revealed that heterozygous mutations in the gamma-secretase genes NCTSN, PSEN1 and PSENEN underlie a few familial cases of HS.[31,32] These would appear to tie in with the above histopathological studies in so far as alterations in gamma-secretase gene expression in animal models can result in follicular occlusion.[33]

The significant inflammatory response seen in HS has led some to speculate that it may be a disease of aberrant immunity and it is noteworthy that immunomodulatory treatments including anti-TNF agents can be of benefit.[34] The female predominance, post-pubertal onset, pre-menstrual flares and clinical improvement often observed during pregnancy imply a role for hormones in HS however the mechanism remains unknown.[35] The role of bacteria in exacerbations is uncertain, for example short courses of antibiotics do not seem to alter natural history of a flare.[10] Antibiotics may confer a benefit via their anti-inflammatory properties rather than any bactericidal or bacteriostatic effects. Obesity may have an impact on HS by mechanically increasing friction at flexural sites (thus potentially damaging follicular outlets), increasing sweat retention or increasing the circulating level of pro-inflammatory cytokines (for example, IL-1β and TNF-α are both secreted by macrophages within visceral fat).[36,37] The exact mechanisms by which smoking contributes to disease pathogenesis remain unclear however nicotine has been shown to induce epidermal hyperplasia and follicular plugging.[38]

7.0 SELF-MANAGEMENT

What can a person with HS do to help manage their condition? In most areas, evidence is weak or absent, however, a list of suggestions is provided below following feedback from patient/carer representatives on the GDG:

- Obtain up-to-date information about HS from the BAD's Patient Information Leaflet web page (www.bad.org.uk/leaflets).
- Consider joining a patient support group, such as the HS Trust in the U.K. (www.hstrust.org). Mutual support is available via associated social media groups.
- Obtain adequate pain relief from your General Practitioner (GP) to help manage the pain associated with HS flares or chronically active disease.
- Avoid tight clothing and synthetic materials that can increase friction and may contribute to flares.

- Obtain wound dressings from your GP to help manage actively pus-producing lesions. Incontinence pads might be needed for high volume of discharge.
- HS is **not** a disease of poor hygiene, however, using an antiseptic wash, such as chlorhexidine solution for the shower, available via the GP, may be beneficial.
- There is no high-quality evidence that particular diets are helpful in HS.
- If you are overweight, weight reduction may improve your disease severity and, depending on BMI, support from NHS weight-management services may be obtained.
- Smoking is a risk factor for development of HS and people with HS have a relatively high risk of cardiovascular disease so stopping smoking, if you currently smoke, is an important part of self-management.
- Depression is more common in those with HS and it is important to seek help from your GP for low mood, if relevant.

8.0 RECOMMENDED AUDIT POINTS

1. In the last 20 consecutive patients diagnosed with hidradenitis suppurativa is there evidence of:
    a) provision of a patient information leaflet
    b) an offer of smoking cessation referral, where relevant
    c) an offer of weight management referral, where relevant
    d) screening for co-morbidities:
        - depression
        - anxiety
        - cardiovascular risk factors (e.g. diabetes, hypertension, hyperlipidaemia and central obesity)
    e) documentation of baseline disease stage (mild, moderate, severe, based on Hurley system)
    f) documentation of disease severity using recognized instruments, including quality of life and pain
    g) a pre-operative discussion for those undergoing surgery, covering duration of recovery and wound care

2. In the last 20 consecutive patients with hidradenitis suppurativa receiving adalimumab therapy:
    a) was a baseline count of inflammatory nodules, abscesses and draining sinus tracts performed?
    b) was there documentation of a Hurley score of II or III in at least one skin region?
    c) was there documentation of contraindication(s) or failure to respond to conventional systemic therapy?
    d) was treatment discontinued if there was a reduction of less than 25% in the baseline total abscess and inflammatory nodule count or any increase in abscesses or draining sinuses?

The audit recommendation of 20 cases per department is to reduce variation in the results due to a single patient and allow benchmarking between different units. However,

departments unable to achieve this recommendation may choose to audit all cases seen in the preceding 12 months.

9.0 STAKEHOLDER INVOLVEMENT AND PEER REVIEW

The draft document and supporting information was made available to the BAD membership, British Dermatological Nursing Group (BDNG), Primary Care Dermatological Society (PCDS), British Society for Dermatological Surgery (BSDS), British Association of Plastic, Reconstructive & Aesthetic Surgeons (BAPRAS), British Medical Laser Association (BMLA), colorectal surgeons and a microbiologist for comments, which were actively considered by the GDG. Following further review, the finalized version was sent for peer-review by the Clinical Standards Unit of the BAD, made up of the Therapy & Guidelines Sub-committee (T&G), prior to submission for publication.

10.0 LIMITATIONS OF THE GUIDELINE

This document has been prepared on behalf of the BAD and is based on the best data available when the document was prepared. It is recognised that under certain conditions it may be necessary to deviate from the guidelines and that the results of future studies may require some of the recommendations herein to be changed. Failure to adhere to these guidelines should not necessarily be considered negligent, nor should adherence to these recommendations constitute a defence against a claim of negligence.

11.0 PLANS FOR GUIDELINE REVISION

The proposed revision date for this set of recommendations is scheduled for 2023; where necessary, important interim changes will be updated on the BAD website.

SUPPORTING INFORMATION

Additional supporting information, including the study selection PRISMA flow diagram, summary of findings with forest plots, GRADE evidence profiles indicating the quality of evidence, clinical evidence summary, summary of included studies, narrative findings for non-comparative studies, LETR, lists of excluded studies and search strategy may be found in the online version of this article.

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Footnote:

This is a new set of guidelines prepared for the British Association of Dermatologists (BAD) Clinical Standards Unit, which includes the Therapy & Guidelines Sub-committee. Members of the Clinical Standards Unit that have been involved are: NJ Levell [Chairman T&G], PM McHenry TA Leslie, S Wakelin, RYP Hunasehally, M Cork, GA Johnston, FS Worsnop, P

Rakvit, A Salim, B McDonald, D Buckley, SL Chua, G Petrof, N Callachand [British National Formulary], T Flavell [British Dermatological Nursing Group], AA Salad [BAD Scientific Administrator], LS Exton [BAD Guideline Research Fellow] and MF Mohd Mustapa [BAD Clinical Standards Manager].

DECLARATIONS OF INTEREST

Details of declarations of interests (cumulative, throughout the project) can be found in the supplementary information (Appendix L).

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